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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,992	12/31/2001	Michael J. Quinn	004683.P009	8595

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MARK J. SPOLYAR
38 FOUNTAIN ST.
SAN FRANCISCO, CA 94114

EXAMINER

CHACE, CHRISTIAN

ART UNIT PAPER NUMBER

2189

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,992

Applicant(s)

QUINN ET AL.

Examiner

Christian P. Chace

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2001.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 3/6/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: In paragraph 39 of page 17, the referenced application is missing the filing date. In addition, please update the status of the application.

Appropriate correction is required.

Claim 14 is objected to because of the following informalities: The claim recites a "recordable media." Although within the understanding of one of ordinary skill in the art, a "recordable media" is not specifically defined in the instant specification. Specifically, page 10, paragraph 18 does define a "storage medium" as being tangible, while a recordable medium is not addressed at all. Accordingly, by changing "recordable media" to "storage media," in accordance with the definition applied in the instant specification, any questions as to tangibility may be circumvented in accordance with current Office policy with respect to same. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to independent claims 1, 7, and 13-15, the claims recite, “compare the incoming flow with a plurality of classes *at the same time* to determine whether the incoming flow matches one of the plurality of classes. (Emphasis added). However, paragraph 22 on page 12 of the instant specification appears to contradict the claim language by reciting, “When a cacheable portion of the classification tree is encountered, the network device performs a cache lookup to determine if the incoming flow matches one of the classes of the traffic class type that is cached. In this manner, the network device is able to check the incoming flow against multiple traffic classes at the same time...” Examiner cannot determine the cause and effect line of logic in this instance – performing a lookup on a cache does not automatically produce the ability to check against multiple flows at the same time. Nor is this ability necessarily obvious to one of ordinary skill in the art, given the explanations herein and at paragraph 43, e.g. There appears to be a gap in the explanation that produces a question as to whether applicants had possession of the claimed invention at the time the instant application was filed. As briefly mentioned supra, applicants are also directed to paragraph 43, which appears to discuss a table-walking procedure that linearly addresses matching in an “ordered” manner, which is one at a time, so to speak. This would appear to teach against the “at the same time” recitation in the claims.

Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In light of the discussion supra, with respect to the written description requirement, it does not appear that one of ordinary skill in the art would be able to make and/or use the claimed invention, specifically the “at the same time” limitation, without undue experimentation.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim language of claim 13 is in “means-plus-function” form. Accordingly, this language invokes claim interpretation under 35 USC 112, 6th paragraph, which requires one to look to the specification for the claimed means. However, in the instant claim, examiner is unable to determine what, particularly and distinctly, the claimed means are. Accordingly, examiner cannot determine the metes and bounds of the instant claim language, thereby rendering it vague and indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Sternin (US Patent #6,751,627).

With respect to independent claims 1, 7, 13 (in so far as it is clear), 14, and 15, taking claim 7 as representative, a method and apparatus for use in a hierarchical classification system is disclosed in the title and abstract.

A memory storing a classification tree is disclosed in figure 4, #402.

A cache to store a cacheable portion of the classification tree is disclosed in figure 4, #404.

A classification engine coupled to the memory to walk the classification tree as part of a hierarchical classification system to determine whether an incoming data flow matches a class in the classification tree is disclosed in figure 6, #604.

Performing a lookup on the cache storing a data structure of a plurality of classes of one classification type is disclosed in figure 6, #606, which uses figure 4 to do so.

Performing the comparison at the same time to determine a match is disclosed in figure 4, with both search trees accessing the table at once.

With respect to claims 2, 8, and 16, the data structure comprising a hash table is disclosed in figure 4, #404.

With respect to claims 3 and 9, the classification engine returning a "class pointer indicative of user programming information" (search index, Abstract) that has been

assigned to a class if the incoming flow matches the class is disclosed in figure 5, #516. It is important to note that the network management protocol table of figure 4 is the "classification type," while each column is a separate "class."

With respect to claims 4 and 10, the classification performing a walk-through the plurality of classes if a determination that the class in the plurality of classes is not known as a result of performing the cache lookup is inherent in a search tree architecture, by definition.

With respect to claims 5 and 11, storing the class in the cache is disclosed in figure 5, #516.

Returning a result indicating the class was in the cache is disclosed in figure 5, #516.

With respect to claims 6 and 12, marking the cache result as indicating that the class is not in the cache and continuing to walk the classification tree from a location in the tree immediately after the end of the portion represented in the cache is inherent in a tree-based structure. However, this is shown in figure 5, #506-514, e.g.

With respect to claims 17-21, figure 4 shows the claimed limitations, with IP addresses being self-explanatory, and "ports" being channels, and "services" being the number of packets.

Claims 1-21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Kobayashi et al (US Patent #6,768,739).

Figures 9-13 and 17-21 are particularly relevant to the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Packer (US Patent #6,046,980) and Applicants' Admitted Prior Art, each taken separately, in view of the USPTO Class 711, subclass 118 definitions.

With respect to the claims, Packer et al discloses the system of the claimed invention (see also Applicants' Admitted Prior Art in the background of the instant specification).

The difference between the claims and AAPA and Packer, each taken separately, is the caching of the has tables.

However, Class 711, subclass 118 teaches caching.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, having the teachings of AAPA, Packer, each taken separately, and the definitions of 711/118 before him/her, to utilize caching in the system of Packer and/or AAPA, because caching places data closer the end-user which provides for faster access to the data desired, as discussed under the subclass 118 heading, and as made hackneyed in the state of the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian P. Chace whose telephone number is 571.272.4190. The examiner can normally be reached on MAXI FLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571.272.4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christian P. Chace
Primary Examiner
Art Unit 2189